

CLAIMS:

1. A high-pressure gas discharge lamp with an asymmetrical discharge space (2) and/or an asymmetrical discharge vessel (1), wherein the discharge space (2) has a volume which is reduced by a given first factor in comparison with the volume of the discharge space of known mercury-containing discharge lamps, and wherein an obscuration of portions of the luminous discharge arc (21) and/or of portions of the electrodes (3) by light-generating substances not evaporated in the operational state is prevented in that the quantity of the light-generating substances in the discharge space (2) is reduced by a second factor which is determined in dependence on the value of the first factor and on the distance, defined by the asymmetry, of the electrodes (3) to a bottom surface (10, 11) that is lowermost in the operational position of the lamp.
2. A high-pressure gas discharge lamp as claimed in claim 1, wherein the discharge space (2) does not contain mercury.
3. A high-pressure gas discharge lamp as claimed in claim 1, wherein the volume of the discharge space (2) is approximately 18 μl .
4. A high-pressure gas discharge lamp as claimed in claim 3, wherein the quantity of light-generating substances is approximately 200 μg .
5. A high-pressure gas discharge lamp as claimed in claim 4, wherein the bottom surface comprises a first portion (10) which is raised by approximately 1 mm with respect to a surrounding second portion (11).
6. A high-pressure gas discharge lamp as claimed in claim 1, wherein the discharge space (2) contains a rare gas.

7. A high-pressure gas discharge lamp as claimed in claim 6, wherein the rare gas is xenon with a xenon cold pressure of between approximately 8 bar and approximately 20 bar, in particular between approximately 10 bar and approximately 15 bar.
- 5 8. A lighting unit with a high-pressure gas discharge lamp as claimed in claim 1.